

PROJECT DESCRIPTION

THIS PROJECT INVOLVES THE MODIFICATION OF THE EXISTING TRAFFIC CONTROL SIGNAL AT THE INTERSECTION OF U.S. 29 AND MD 865 (LOCKWOOD DRIVE) IN MONTGOMERY COUNTY. APS PUSHBUTTONS, L.E.D. COUNTDOWN PEDESTRIAN SIGNALS, AND VIDEO DETECTION CAMERAS WILL BE INSTALLED AT THIS LOCATION. IT IS ASSUMED THAT U.S. 29 RUNS IN A NORTH-SOUTH DIRECTION.

INTERSECTION OPERATION

THIS INTERSECTION CURRENTLY OPERATES IN A NEMA FOUR-PHASE FULL-TRAFFIC-ACTUATED MODE WITH AN ALTERNATE PEDESTRIAN PHASE FOR CROSSING THE NORTH LEG OF THE INTERSECTION AND A CONCURRENT PEDESTRIAN PHASE FOR CROSSING THE EAST LEG OF THE INTERSECTION. THE CONCURRENT PHASE ON THE EAST LEG WILL BE REMOVED. A NEW ALTERNATE PEDESTRIAN PHASE FOR THE SOUTH LEG AND A NEW CONCURRENT PHASE FOR THE WEST LEG WILL BE ADDED.

CONTROLLER REQUIRMENTS

THE EXISTING FULL-TRAFFIC-ACTUATED EIGHT PHASE TRAFFIC SIGNAL CONTROLLER HOUSED IN A BASE MOUNTED CABINET WILL BE USED. INSTALLATION OF THE VIDEO DETECTION INTERFACE EQUIPMENT AND RETROFITTING OF THE DETECTOR RACK WILL BE PERFORMED BY MONTGOMERY COUNTY. AN APS CENTRAL CONTROL UNIT WILL BE INSTALLED BY THE CONTRACTOR.

CONTACT PERSONS FOR DISTRICT 3 ARE AS FOLLOWS:

MR. JEFF WENTZ
ASSISTANT DISTRICT ENGINEER - TRAFFIC
(301) 513-7316

MR. WAYNE MOWDY
ASSISTANT DISTRICT ENGINEER - MAINTENANCE
(301) 513-7304

MR. KEVIN NOWAK
ASSISTANT DISTRICT ENGINEER - CONSTRUCTION
(301) 513-7385

MR. AUGIE REBISH
UTILITY ENGINEER
(301) 513-7350

CONTACT PERSONS FOR OOTS ARE AS FOLLOWS:

MR. RICHARD DAFF, SR.
CHIEF TRAFFIC OPERATIONS
(410) 787-7630

MR. ED RODENHIZER
CHIEF, SIGNAL OPERATIONS
(410)787-7630

MS. DARLENE EIDE
SIGNAL SHOP WAREHOUSE
(410) 787-7696

MR. ROBERT SNYDER
ASSISTANT DIVISION, CHIEF
TRAFFIC OPERATIONS
(410) 787-7630

MR. EUGENE BAILEY,
CHIEF, SIGN OPERATIONS
(410) 787-7676

CONTACT PERSONS FOR MONTGOMERY COUNTY ARE AS FOLLOWS:

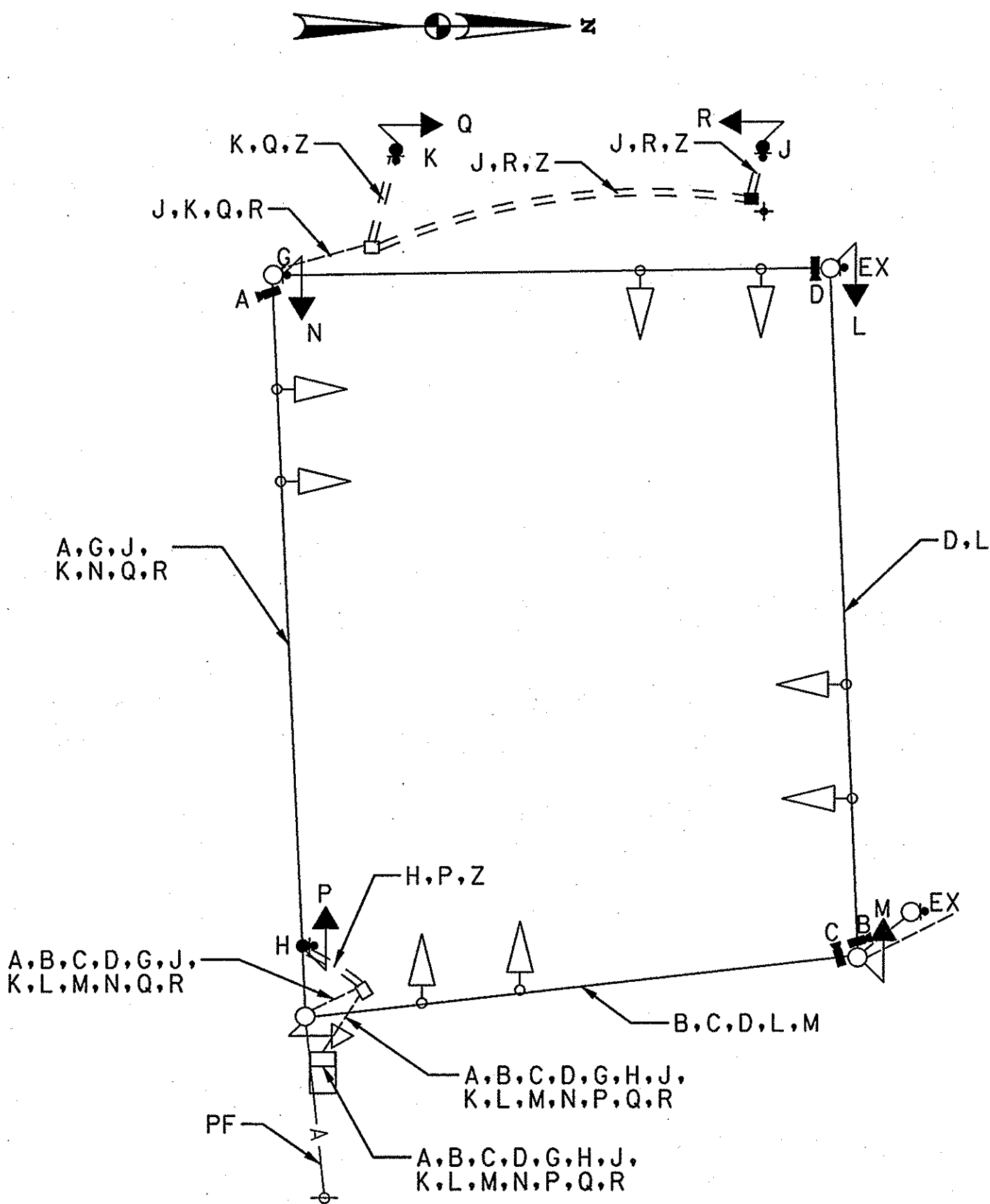
MR. KAMAL HAMUD
MONTGOMERY COUNTY DPW&T
(240) 777-8761

MR. KEITH LORD
MONTGOMERY COUNTY DPW&T
301-279-1291

PHASE CHART

	1	2	3	4	5	6	7	8	19	20	21	22	23	24	
	(R)	(R)	(R)	(R)	(R)	(R)	(R)	(R)							
	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)	(Y)							
	(G)	(G)	(G)	(G)	(G)	(G)	(G)	(G)							
PHASE 2 & 6	G	G	G	G	R	R	R	R	DW	DW	DW	DW	WK	WK	
PED CLEARANCE/COUNTDOWN	G	G	G	G	R	R	R	R	DW	DW	DW	DW	FL/DW	FL/DW	
2 & 6 CHANGE	Y	Y	Y	Y	R	R	R	R	DW	DW	DW	DW	DW	DW	
PHASE 4 & 8	R	R	R	R	G	G	G	G	DW	DW	DW	DW	DW	DW	
4 & 8 CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	
PHASE 4 & 8 ALT	R	R	R	R	G	G	G	G	WK	WK	WK	WK	DW	DW	
PED CLEARANCE/COUNTDOWN	R	R	R	R	G	G	G	G	FL/DW	FL/DW	FL/DW	FL/DW	DW	DW	
4 & 8 ALT CHANGE	R	R	R	R	Y	Y	Y	Y	DW	DW	DW	DW	DW	DW	
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	FL/R	DARK	DARK	DARK	DARK	DARK	DARK	

WIRING DIAGRAM



WIRING KEY

A,B,C,D	CONTROL CABLE 250 FT. LENGTH
G,H,J,K	ELECTRICAL CABLE 2-CONDUCTOR (NO. 14 A.W.G.)
L,M,N, P,Q,R	ELECTRICAL CABLE 5-CONDUCTOR (NO. 14 A.W.G.)
Z	STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
EX	USE EXISTING CABLE
PF	EXISTING OVERHEAD POWER FEED
+	INSTALL GROUND ROD

EQUIPMENT LIST "A"

A. EQUIPMENT TO BE FURNISHED BY SHA/MONT. CO.

CATEGORY CODE	DESCRIPTION	UNIT	QUANTITY
900000	VIDEO INTERFACE EQUIPMENT 1-4 CAMERAS	EA	1
900000	DETECTION RACK RETROFIT	EA	1
973023	SHEET ALUMINUM SIGNS	SF	5
	2 EACH R10-4(1) (9" X 12") "Columbia Pike" - POLE MOUNT		
	2 EACH R10-4(1) (9" X 12") "Entrance" - POLE MOUNT		

EQUIPMENT LIST "B"

B. EQUIPMENT TO BE FURNISHED AND/OR INSTALLED BY CONTRACTOR.

CATEGORY CODE	DESCRIPTION	UNIT	QUANTITY
203030	TEST PIT EXCAVATION	CY	3
800000	F&I APS PUSHBUTTON AND ASSY.	EA	6
800000	FURNISH & DELIVER APS CENTRAL CONTROL UNIT	EA	1
800000	F&I 16" LED COUNTDOWN PEDESTRIAN SIGNAL HEADS	EA	6
800000	ADJUST AND RE-RING EXISTING SPAN WIRE	EA	2
800000	REMOVE AND DISPOSE OF EXISTING EQUIPMENT	LS	*
801004	CONCRETE FOR SIGNAL FOUNDATION	EA	3
802145	ADJUST EXISTING HANDHOLE	CY	1
802501	NO. 6 AWG STRANDED BARE COPPER GROUND WIRE	LF	110
805125	2 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	25
805135	3 INCH SCHEDULE 80 RIGID PVC CONDUIT-TRENCHED	LF	15
805155	4 INCH SCHEDULE 80 RIGID PVC CONDUIT-SLOTTED	LF	60
811001	F&I ELECTRICAL HANDHOLE	EA	1
813015	INSTALL OVERHEAD SIGN	SF	5
816001	VIDEO DETECTION CAMERA	EA	4
816005	CONTROL CABLE, 250 FOOT, VIDEO DETECTION CAMERA TO CONTROLLER	EA	4
818004	10 FOOT BREAKAWAY PEDESTAL POLE	EA	3
837001	GROUND ROD - 3/4 INCH DIAMETER X 10 FOOT LENGTH	EA	1
861105	ELECTRICAL CABLE - 2 CONDUCTOR (NO. 14 AWG)	LF	555
861107	ELECTRICAL CABLE - 5 CONDUCTOR (NO. 14 AWG)	LF	1170
869101	STEEL SPAN WIRE - 1/4 INCH DIAMETER	LF	200

* - REMOVE AND DISPOSE QUANTITIES ARE SHOWN ON THE LAST GI SHEET

EQUIPMENT LIST "C"

C. EXISTING LOOP DETECTOR AMPLIFIERS SHALL BE REMOVED BY THE CONTRACTOR AND RETURNED TO MONTGOMERY COUNTY.

ALL OTHER UNUSED EQUIPMENT AND MATERIAL REMOVED BY THE CONTRACTOR SHALL BECOME THE PROPERTY OF THE CONTRACTOR.



STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

U.S. 29 (COLUMBIA PIKE) AND
MD 895 (LOCKWOOD DRIVE)

GENERAL INFORMATION SHEET

SCALE	NONE	DATE	11/2005	CONTRACT NO.	M03755177
DESIGNED BY	TO/MRB	COUNTY	MONTGOMERY		
DRAWN BY	TO/MRB	LOGMILE	15002903.88		
CHECKED BY	DAE	TIMS NO.	H053		
FAP NO.		TOD NO.			
TS NO.	1960	DRAWING	-	OF	
		SHEET NO.	8	OF	10

ADDENDUM NO. 1
NEW SHEET



RUMMEL, KLEPPER
& KAHL, LLP

CONSULTING ENGINEERS

81 MOSHER STREET
BALTIMORE, MARYLAND 21217

TELE: (410) 728-2900 FAX: (410) 383-3270

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FILE: 04/21/2006

BY: \$USER\$